

GP-302680

REFERENCE VOLTAGE DIAGNOSTIC SUITABLE FOR USE IN  
AN AUTOMOBILE CONTROLLER AND METHOD THEREFOR

## ABSTRACT

A diagnostic apparatus is suitable for use in an automobile controller and includes a power supply terminal conducting a reference voltage, a sampling circuit and a reference voltage diagnostic circuit. The sampling 5 circuit is coupled to the power supply terminal and has an output terminal for providing sampled values of the reference voltage. The reference voltage diagnostic circuit has an input terminal coupled to the output terminal of the sampling circuit. The reference voltage diagnostic circuit maintains a historical value of the reference voltage over a predetermined time period, 10 compares a current sampled value of the reference voltage to the historical value, and indicates a fault in the reference voltage in response to the current sampled value being different from the historical value by more than a predetermined threshold.